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
# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,061	02/20/2002	Steven Teig	SPLX.P0126	5941
23349	7590	03/17/2004		
STATTLER JOHANSEN & ADELI P O BOX 51860 PALO ALTO, CA 94303			EXAMINER DO, THUAN V	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/079,061	TEIG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuan Do	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/20&amp;10/27&amp;11/17/03</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

1. Claims 1-15 are pending in this office action.

### ***Claim objections***

Claim 1, the terms "- set of potential sub-region- -" are unclear to what potential means. Clarification or correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being unpatentable over Rostoker et al. Pat. No. 6407434.

**Regarding claim 1:** Rostoker teaches a method comprising:

- a) defining a set of partitioning lines for partitioning the region into a plurality of sub-regions during a placement operation (col. 3, lines 41-63 and col. 12, lines 39-41) ;
- b) for each set of potential sub-regions, identifying a connection graph that traverses the set of potential sub-regions, wherein some of the connection graphs have edges that are at least partially diagonal (col. 9, lines 62-64 for connection graph design and col. 50, lines 23-28 having partial diagonal line edge with angled intersection of lines ) ;

c) identifying an attribute of each identified connection graph (col. 1, lines 44-53 optimizing an attribute of wire length and col. 9, lines 62-64 for connection graph design );

d) for each set of potential sub-regions, storing the attribute of the connection graph identified for the set (col. 59, lines 44-60 for routing graph connection storage).

**Regarding claim 2:** Rostoker teaches a method with the shortest graph (col. 43, lines 22-29).

**Regarding claim 3:** Rostoker teaches a method with Steiner tree (col. 60, lines 13-25).

**Regarding claim 4:** Rostoker teaches a method with a bend value and storage (col. 50, lines 23-28 and col. 59, lines 44-60).

**Regarding claim 5:** Rostoker teaches a method with the number of diagonal bends (col. 50, lines 23-28).

**Regarding claim 6:** Rostoker teaches a method with a partitioning grid (col. 60, lines 26-35).

**Regarding claim 7:** Rostoker teaches a method with coordinate lines (col. 16, lines 36-42).

**Regarding claims 8-15:** These claims teach the method similar to the method of claims 1-7 and rejected in similar manner except the cost is specified in column 14, lines 9-14.

## **CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 571-272-1891. The examiner can normally be reached on Monday-Friday 8:30-5:30 (except 2<sup>nd</sup> Fridays).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3431 for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.



Thuan Do  
Patent examiner  
3/7/04